

the snails. Their extreme sensitiveness was shown by their anticipation of a weather change from dry to wet, eight to twelve hours before visible signs were given, but what seemed more remarkable was the general withdrawal to shelter of all the snails during a rain period two to three hours before a final clearing of the atmosphere.

A village neighbor kept alive all summer a fine large *P. albolabris* in a small window garden. "Alby's" mistress declared that he was a most reliable barometer and that she could safely accept his weather predictions. The mornings he selected for a stroll beyond the limits of his garden were sure, she alleged, to be followed by thunderstorms in the afternoon.

I also observed that upon certain fair days the board sidewalks were covered with *Cochlicopa lubrica*, hundreds being crushed by pedestrians. I was finally able to verify my theory that these tiny mollusks left their damp retreats beneath the boards from six to eight hours before rain. Indeed, I used the sign frequently to my advantage to regulate my collecting rambles farther afield.

I was unable to discover that the small and minute species living habitually under bark and among debris was affected by weather changes, though I have little doubt that closer observation would show them to be considerably influenced by the amount of moisture in the air. The one very noticeable exception to this was in the case of *Strobilops*. I learned to look for them only in the driving rain, when they all left their usual stations beneath the bark of fallen trees to crawl about in the open.

NOTE ON LUCINA (MILTHA) CHILDRENI GRAY AND ON A NEW SPECIES
FROM THE GULF OF CALIFORNIA.

BY WILLIAM HEALEY DALL.

In my synopsis of the Lucinacea (1901, p. 812) on the authority of Dr. Carpenter (Suppl. Rep. Brit. Assoc. for 1863, pp. 552, 620), I stated that the *Phacoides* (*Miltha*) *childreni* Gray, was a native of the Gulf of California and that the original ascription of it to Brazil was an error. I am indebted to Dr. H. von Ihering of the Museu Paulista, Sao Paulo, Brazil, for the means of correcting this statement, which proves to be mistaken.

The shell was first described as *Lucina childrenæ* by Gray in the *Annals of Philosophy*, for 1825, p. 136. Nearly at the same time he referred to its unequal valves in the *Zoölogical Journal*, 1, p. 221. In the autumn of the same year Sowerby figured the interior of a right valve in part xxvii of his "Genera" under the name of *Lucina childreni*. Only in 1828, in the supplement to Wood's *Index Testaceologicus*, was the shell called *Tellina childreni* and figured on supplementary plate 1, figure 1.

The shell was recently collected at Pernambuco by Senor Alfredo de Carvalho and sent to Dr. Von Ihering, who forwarded a specimen to the National Museum, thus confirming Gray's original locality. On comparison with specimens from Cape St. Lucas, named by Carpenter, it became evident that we had to do with two very similar but distinct species. The rarity of the shell is doubtless responsible for the delay in discovering the mistake.

The Brazilian species will of course keep the name given by Gray. To the Cape St. Lucas form we may give the name of *Phacoides (Miltha) xantusi* in honor of its discoverer.

The differences are only apparent on a close scrutiny. The *P. xantusi* seems to be a smaller species when adult, more rounded, more equivalved and with a shorter ligament. It has a more or less bifurcate and vermiculate radial sculpture, that of *P. childreni* being finer, more regular and more distinctly divided into fine continuous radial grooves and a microscopic minor sculpture between them.

As in many other Lucinacea, directly under the beaks there is a small impressed area. In *P. xantusi* this in the right valve projects so as to fill an excavation in the other valve and is so much impressed as to make the beak appear sharper and more produced and to distinctly arcuate the two cardinal teeth. In *P. childreni* the area is smaller, less impressed, not markedly extended toward the other valve and the teeth remain straight. Outside this area a narrow lunule, concentrically striated and bounded by an incised line, rises almost vertically with a length of 19 mm. and a height of about 2 mm. In the Californian species the lunule is very small and bent vertically downward so that in the closed valves it is excavated and not projecting and has a length of about 6 mm. It is almost wholly confined to the right valve. If my specimens fairly represent the species, the posterior area in the Brazilian shell is proportionately

shorter than in the Californian and the basal margin much more produced.

It may be noted that all the figures, including that of Reeve in the *Iconica* (*Lucina* pl. iii, fig. 12, 1850), represent the Brazilian species. The group is represented by nine species in the Tertiary of the Southern United States and Lower California, from the Claibornian up to the Pliocene. It is interesting to find that the Florida Pliocene, *P. caloosana* Dall, though smaller, has the upraised lunule like that of Brazil; while the Pliocene, *P. joannis* Dall, of San Juan, Lower California (opposite Guaymas), resembles the recent *P. xantusi* in having the folded lunule, only, in this case, the margin is more deeply infolded and the shell heavier, more elongate-oval, and about one-fourth smaller. It measures 55 mm. in height by 51 mm. in width; *P. xantusi*, 71 x 65 mm., and *P. childreni*, 86 x 77 mm.

FURTHER NOTES ON THE SPECIES OF *MARTESIA* OF THE EASTERN COAST OF THE UNITED STATES.

BY CHARLES W. JOHNSON.

Since the publication of my article on the species of *Martesia* of the Eastern United States, I find I have overlooked two important facts, involving one, and possibly two species. The first is *Martesia* (*Martesiella*) *fragilis* Verrill and Bush (Proc. U. S. Nat. Mus., xx, p. 777, pl. 79, f. 10, 1898). For this species the above new subgenus is proposed, "which differs from *Martesia* in having a well-defined, elongated, median, dorsal plate, posterior to the umbos, in addition to the shield-shaped one over them." This seems to be a typical *Martesia* for the "elongated median, dorsal plate" (metaplast) is present in all the species. The description of the shell, "umbonal plate" (protoplast), and the figure would indicate that it is very close to or identical with a small specimen of *M. striata* Linn. The "specimens were found in a piece of wood floating near Station 2565, N. lat. 37° 23', W. long. 68° 8'," about 500 miles off the coast of North Carolina.

The second and more important omission was kindly pointed out by Dr. Dall, who in a recent letter says: "I read your paper in the last *NAUTILUS* with much interest, but I cannot agree with you in regard to the *Pholas semicostata* of Lea, for which I proposed the